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AUTHOR Petty, Gregory C.; And Others
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ABSTRACT

A study was conducted to determine the types of training and educational levels desired for entry-level employees in Tennessee and to obtain employer ratings of entry-level work skills for Tennessee vocational education graduates as compared to nonvocational education graduates. Additionally, 61 Tennessee employers identified by school districts were asked their opinions about raising taxes to increase funding for vocational education. Information was collected through surveys mailed to a random sampling of businesses hiring recent vocational program graduates. Analysis of the data showed that, overall, business and industry and local communities are supportive of vocational education. Employers indicated that recent secondary vocational graduates had better entry-level work skills than recent graduates without vocational education. Employers were pleased with the job performance of recent vocational graduates; however, they do not support tax increases to increase vocational education funding. Employers suggested that more vocational education programs focus on preventing dropouts and that more work experience opportunities would help vocational education graduates. Employers also recommended that vocational education teachers should have subject-matter related work experience, a college degree, and a state license. Recommendations were made for educators to stress the importance of vocational education to all students, especially to potential dropouts. (Includes 31 references and the questionnaire.) (Author/KC)

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RESEARCH IN TENNESSEE SECONDARY VOCATIONAL- TECHNICAL EDUCATION

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Gregory C. Petty
Don E. McNelly
Mary Ann Serle

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**EMPLOYER RATINGS OF
VOCATIONAL EDUCATION GRADUATE EFFECTIVENESS**

August 1989

By

**Gregory C. Petty
Don E. McNelly
Mary Ann Searle**

EMPLOYER RATINGS OF
VOCATIONAL EDUCATION GRADUATE EFFECTIVENESS

A Research Study Exploring Business and Industry Employers'
Perception of the Effectiveness of Secondary Vocational
Education Programs in Tennessee

Principal Investigators: Gregory C. Petty
Don E. McNelly
Mary Ann Searle

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PREFACE

Several individuals have made contributions to initiating the research projects. Special recognition is hereby extended to the State Staff. Mr. Marvin Platt, Assistant Commissioner for Vocational-Technical Education, Tennessee State Department of Education, Mr. Russell Smith, Administrative Assistant and Director of Field Services, and Mr. Jim Vinson, Director of Program Planning and Development. Special recognition is also extended to Dr. Gerald Cheek, Professor and Chairperson for the Department of Technological and Adult Education, University of Tennessee - Knoxville for technical advice and departmental support for graduate assistants to help conduct the studies. The research projects would not have been possible without their support and assistance. Many local vocational administrators assisted by providing primary information or lists of names and addresses for securing additional information.

Seventeen potential research topics were gleaned from the Carl D. Perkins Vocational Education Act as being areas of interest for vocational education. The state staff identified six topics for first year priority. The research was conducted through the State Vocational Program Evaluation Project with various UTK professors invited to participate and graduate assistants provided by the department of Technological and Adult Education. The studies were conducted for the purpose of helping to secure information of interest and use by the State staff. Restrictions were placed upon each study with respect to the funding made available. The scope of this study and the other studies were confined to operate within the budgeting constraints. No graduate student used the data for a dissertation or thesis.

Secondary vocational-technical education is serving many secondary students in Tennessee. This research report should provide information to policy makers and planners to assist them in their efforts to continue to provide quality vocational-technical education for all secondary students in Tennessee.

Don E. McNelly
Director
State Secondary Vocational
Program Evaluation Project and
Principal Investigator

TABLE OF CONTENTS

	Page
Abstract.....	i
Introduction.....	1
Statement of the Problem.....	1
Purpose of the Study.....	2
Limitations.....	2
Context for Study.....	4
Review of Related Literature.....	4
Results of Analysis.....	17
Method of Study.....	17
Instrumentation and Data Collection.....	19
Data Analysis.....	20
Conclusions.....	37
Recommendations.....	39
References.....	40
Appendix A.....	44

LIST OF TABLES

	Page
Employer Responses by Number of Local Employers.....	20
Employer Respondents by the Number of Entry-Level Employees Hired Last Year.....	21
Entry-Level Employees Under Twenty Hired by Local Business Last Year.....	21
Value of Sources for Finding New Entry-Level Employees.....	22
Type of Training Desired for Entry-Level Employees.....	23
Type of Educational Background Desired for Entry-Level Employees.....	25
Quality Rating of Entry-Level Skills for Secondary Vocational Education Graduates Compared to Non-Vocational Education Graduates.....	28
Opinions Regarding Effectiveness of High School Vocational Education in Home Area.....	32
Factors That Influenced Opinions on Secondary Vocational Education.....	36

ABSTRACT

Some national studies have revealed the possibility that vocational graduates are better prepared for their jobs than are academic graduates. Because these national studies suggested that vocational students have a superior job preparation education and due to the lack of such evidence in Tennessee this study was conducted.

The purposes of this study were to determine the types of training and educational levels desired for entry-level employees in Tennessee and to obtain employer ratings of entry-level work skills for Tennessee vocational education graduates as compared to non-vocational education graduates. Additionally, Tennessee employers were asked their opinions regarding obtaining increased funding for vocational education through property or sales tax increases and the effectiveness of high school vocational education programs. This information was obtained through surveys sent to a random sampling of businesses hiring recent vocational education program graduates and analyzed by descriptive statistics such as means and percentages.

Overall, business and industry and local communities are supportive of vocational education. Employers indicated that the recent secondary vocational graduates had better entry-level work skills than recent graduates without vocational education. The majority of employers felt the vocational graduates had better basic skills than the graduates without vocational education and that they are pleased with the job performance of the vocational education graduates they hire but do not support increased funding through a property tax or sales tax increase. Employers also suggested that more vocational education programs should focus on helping prevent drop outs and that more work

experience opportunities would help the vocational education program graduate.

With regards to vocational program teachers, employers felt subject matter related work experience and a university degree would make the vocational education teacher a better teacher and that a state teaching license should be required for vocational education teachers. In general, Tennessee employers feel that vocational education is cost effective for business and industry in reduced training time for entry-level employees and that their opinions toward local vocational programs are influenced most by knowing someone in vocational education, talking to vocational education teachers, and from hiring employees from vocational education programs.

As a result of this study it is recommended that high school counselors and administrators continue stressing the importance of vocational education to all students especially those at high risk of dropping out. Administrators and vocational teachers should consider adding cooperative education programs if they currently do not have such programs and administrators should emphasize the importance of subject matter work experience and university degrees for new and existing vocational teachers. It is also recommended that all levels of school personnel, administration, teachers, and counselors, keep better job placement records of program graduates.

INTRODUCTION

The effectiveness of secondary vocational education is purportedly measured by job placement ratios of the young graduates. However these data may be as much an indicator of a community's economic health as the livelihood of the vocational education program.

Several studies revealed general agreement that vocational education on the national level is meeting the needs of employers. And while vocational and academic graduates have been rated similarly on several work characteristics, employers professed that vocational education graduates were actually better prepared for entering the world of work and accomplishing their career objectives than were the academic graduates.

Employers responding to national surveys reported that vocational education graduates required less in-house training and saved businesses valuable training money. Additionally, employers placed emphasis on the effectiveness of cooperative education and work experience programs because students are able to apply the knowledge and skills learned in the classroom to an on-the-job training experience.

Statement of Problem

While some national studies may have revealed trends that impact on Tennessee, no research has been conducted in Tennessee that supports or rejects the premise that secondary vocational graduates are better prepared for their jobs than are academic graduates. Because these national studies suggested that vocational students have a superior job preparation education and due to the lack of such evidence in Tennessee this study was conducted.

Purpose of Study

The purposes of this study were:

1. To determine the types of training desired for entry-level employees in Tennessee.
2. To determine the educational levels desired for entry-level employees in Tennessee.
3. To obtain employer ratings of entry-level work skills for Tennessee secondary vocational education graduates as compared to non-vocational education graduates.
4. To determine the attitudes of Tennessee employers regarding obtaining increased funding for vocational education through property or sales tax increases.
5. To obtain employer opinions regarding the effectiveness of high school vocational education programs.

Limitations

This study was conducted from a purposive sample of vocational education graduates from 126 school systems. Eighteen school systems were solicited for placement data of 1987 graduates with three or more vocational programs credit in one program area. Only six schools responded with usable placement data. From this information, 175 questionnaires were mailed to the employers of the vocational education program graduates. Other constraints include:

1. The accuracy of the self-reported data from secondary vocational education and business and industry personnel;
2. The manner in which the secondary vocational and business and industry persons interpreted and responded to the items on the second questionnaire.

3. The scope of the study was confined to operate within the budgeting constraints.

CONTEXT FOR STUDY

This study, Employer Ratings of Vocational Education Effectiveness, is one component of a six study research project conducted by the Department of Technological and Adult Education at the University of Tennessee. The research projects are designed to provide feedback to the state staff on the status and progress of Tennessee vocational education programs. It is the assumption of the researchers that all of the studies are interrelated to some degree, and upon completion of the project, the data analyses can be combined to present conclusions and recommendations to the state staff for vocational education program planning and decision making.

The following review of literature includes the conclusions and recommendations of several studies regarding employer ratings of vocational education effectiveness. Employers were asked to provide ratings for vocational education graduates as compared to non-vocational education graduates. Employers described benefits provided by vocational education programs, vocational educators, and vocational education graduates. These examples of similar studies include descriptions of the research efforts of the forerunners of the study reported here.

Review of Related Literature

According to Franchak (1981), Job Performance = Motivation (perception of effort and setting performance goals) + Skills (aptitude, training, and job experience) + Role Conception (employee's ideas about what the job involves). In order to achieve a good job performance, one must have adequate training in all of the preceding components of job

performance. This outlines the need for vocational education to help prepare future workers for good job performance with training in motivation, skills, and role conception.

A review of the current and historical literature dealing with the follow-up and evaluation of vocational education includes the following areas:

1. Traits that employers feel are important for employee job performance
2. Lack of basic skills training for employees
3. Specific benefits of vocational education to business
4. Specific benefits of cooperative education to business
5. Suggestions by business for the improvement of vocational education

The literature review will address each of the above areas of concern.

Traits That Employers Feel Are Important For Employee Job Performance

The Florida Atlanta University study (1979) stated that over 49% of the employers responding rated vocational training, adaptability, work quality, technical training, and ability to follow instructions of their employees above average. The highest rating was an "excellent" in working with others by 39% of the employers. Two thirds of these employers said vocational education met their labor force needs.

The Texas Education Agency study (1978) revealed that community college vocational education graduates were "good" or "very good" in personal skills areas, such as accepting responsibility, punctuality,

personal initiatives, willingness to learn, co-worker and management cooperation, work attendance, and attitude. On the contrary, the employees tended to rate lower on technical skills, such as mathematical computation skills, organizational ability, and communications skills. Overall, these Texas employers felt that the community college graduates were better prepared for work than those who had not received this type of vocational training.

Montemayor, Hardin, and Reed (1986) report on a study in Arizona where employers were asked to compare occupational students to academic students. The occupational students were given high marks for their willingness to learn, compliance with employer policies, and work attitudes and low marks for their problem solving skills, communications skills, math skills, and organizational ability. Academic students were given very similar marks. Their strengths were in work attendance, accepting responsibility, and work attitudes while their weaknesses revealed a lack of technical knowledge, problem solving skills, math skills, and organizational ability. As an overall measurement, the employers said they felt the occupational students were better prepared for the work world than the academic students.

Crim and Hansen (1987) stated that more than 70% of the employers surveyed rated marketing Education graduates as "very good" or "good" on the following work characteristics: work attitudes, willingness to accept responsibility, punctuality, attendance, cooperation with management and co-workers, and ability to work without supervision. These graduates were, in part, meeting the expectations of employers.

Crain (1984) agreed that vocational education is meeting the needs of employers and providing students who have mastered the needed reading

and math skills. More than half of the respondents rated the following traits and skills as "extremely important" for their employees: dependability, proper attitudes, good team members, basic adult literacy, good judgement, quick learning and basic arithmetic. Less than 33% saw "specialized knowledge" as an "extremely important" trait.

Campbell and Parnes (1986) stated students who had concentrated in vocational education subjects while in high school were more likely to spend more time in the labor force, be paid higher earnings, and have higher rates of production. He also noted that vocational education graduates frequently enter post-secondary educational institutions to continue their education. On the contrary, he said there are reports of lower productivity from vocational education graduates, but this is due to the fact that many of these students come from lower socioeconomic levels, rural areas, and low levels of ability. These students typically possess characteristics that are not associated with "success in the labor market." It seems clear that vocational education graduates should be compared with others like themselves with respect to these factors, or the results will be biased against vocational education curriculum.

Wilms (1984) studied employers in the Los Angeles area and found good work attitudes and work habits to be the most important characteristics when employers hire new employees. There are few jobs that do require specialized skills; these jobs also require a two year post-secondary degree. This study found very few employers who felt educational credentials were important as long as good work attitudes and habits existed. Less than 50% of the employers surveyed preferred vocational education graduates; yet employers who hired for jobs that

required highly technical skills did prefer vocational education graduates as employees. Most of the businesses did in-hours training because they felt no one could train their employees for their particular business.

Willett and Piland (1973) reported the results of a study of graduates of occupational programs from Moraine Valley Community College in Illinois. The employers responding made the assumption that the chances of advancement of half of the vocational education graduates were higher than the chances of other employees in similar positions who had not been involved in vocational education. They also noted that supervisors wanted to hire vocational education graduates because there was a positive correlation between the community college evaluation and an employee's job evaluation.

After reviewing the current and historical literature, some conclusions can be made about the traits that employers feel are important for employee job performance and whether or not vocational education is providing good skilled workers for the current workforce. The majority of businesses surveyed would prefer to hire vocational education graduates, assuming they know these graduates were available. Yet, there are still employers who do not know vocational education exists today. There is agreement that vocational education students are better prepared for the world because the majority of these graduates do possess good work habits and positive attitudes. These traits help vocational education graduates be more productive; therefore, they are promoted more rapidly than employees without vocational education training. There is also agreement that employees with and without vocational education training still need to develop their mathematical

computation, communications (oral and written) and organization skills. Once good work habits and positive attitudes are combined with these skills, employees will meet the expectations and needs of employers today and in the future.

The Lack of Basic Skills Training For Employees

When addressing the lack of basic academic skills training for employees nationwide, there is widespread discrepancy in the literature. Some employers agree with A Nation At Risk (1984). This document blasts the United States current educational system stating that the poor quality of high school graduates contributes to the declining ability of businesses in the United States to compete with foreign businesses. While other employers feel the current educational system is good, but like anything else, it could be improved. Vocational education is no exception; it, too, could be improved to better meet the needs of business.

Crain (1984) reports that a nationwide survey was done to examine high school quality as revealed in responses of personnel officers and in their recruiting and employment practices. It is interesting to note the data indicated that only 5% of personnel officers surveyed reported lack of basic skills as a problem. They were not worried about high school graduates' grades or the quality of the high school attended but rather dependability and proper work attitudes. Over 50% of the respondents did desire reading and math skills, but there was not a problem because the majority of graduates did possess the necessary basic skills. They made sure to note they definitely did not need employees who had been enrolled in advanced level classes such as,

chemistry, calculus, physics, literature, or foreign language to insure success in the workplace.

On the other side, the Oregon State Department of Education (1983) suggests the educational system needs major reform to meet the needs of business. In fact, two-thirds of the responding employers did not know vocational education existed in Oregon. The employers noted the following weaknesses of new employees: Poor oral and written communications skills, poor mathematical computational skills, a general lack of understanding of "real world" business and economics as it relates to business, unable to generalize skills, lateness to work, lack of motivation, lack of computer literacy, poor time management techniques, and an overall lack of basic academic skills. It should be added that the poor economic situation in Oregon could be affecting the attitudes of business people. Very few new employees had been hired due to major lay-offs; job positions were being filled by those who had previously been laid off.

Specific Benefits Of Vocational Education To Business

Stonehouse (1987) outlined several of the benefits that vocational education provides to business in Georgia. Two thirds of the employers responding said that about 50% of new hires needed vocational education training. Employees with vocational education training required less in-house training and saved business valuable money spent on training. Eighty percent of these same employers stated that vocational education was actually more important to them than computer literacy. According to the Georgia employers, vocational education teaches good work habits, increases the awareness of technology used in business, lowers the high

school dropout rate, encourages economic development, offers training opportunities for the handicapped, and provides retraining for adults.

Stonehouse (1987) lists specific benefits for vocational education to business, and there is agreement among the other literature sources that the statement she makes are indeed correct. As vocational education programs attempt to prepare high school students for the traits and skills that employers desire, the benefits of vocational education programs become obvious.

Specific Benefits Of Cooperative Education To Business

The Oregon State Department of Education (1988), blasted our educational system as discussed above. To the credit of vocational education, the employers were also quick to say that cooperative education was the best way to combat the weaknesses of the educational system. Cooperative education takes over where the general education leaves off and prepares students for jobs in the real world by allowing them to get actual work experience while still in school.

Kruper, Phillips, and Maynard (1987) dealt with the cooperative education programs offered at the university level, but some of the points made can also be applied to the secondary cooperative education programs. Seventy companies were surveyed who had participated in cooperative education. Cooperative education was viewed as a means of attracting and retaining good employees in the face of the current work force reduction. The employers listed the following benefits of cooperative education programs and cooperative education employees to business: lowered recruitment costs, reduced training costs, lowered attrition costs, lowered fringe benefits costs, faster learning skills,

quicker progression and advancement, increased motivation, shorter training periods, better communications skills, better technical skills, and increased quality and quantity of work. Due to these benefits listed, cooperative education employees were retrained and promoted more frequently than those employees who were not involved in cooperative education.

Silberman (1986) noted that cooperative education is considered to be the best form of vocational education because students are able to apply the knowledge and skills learned in the classroom to an one-the-job training experience. These employees provide good work habits and attitudes along with skills that can be generalized to a job experience.

Suggestion By Business For the Improvement of Vocational Education
Montemayor, Hardin, and Reed (1986) state the vocational education needs to train students more adequately by offering the following:

1. Better communications skills (verbal and written) training
2. More "hands on" training
3. Better preparation for job interviews
4. More problem solving training
5. More specialized training in the vocational subject areas
6. An updated "true to life" curriculum
7. More organization and prioritization skills training

The Oregon State Department of Education (198) offers solutions to combat the problem of inadequate vocational education training in Oregon. These solutions include the following:

1. Stress the "basics"
- 2. Prepare college bound students for employment
3. Offer more cooperative education programs

4. Offer tax credit incentives to help businesses who wish to donate equipment to the schools
5. Consider paying the vocational teachers in highly competitive fields more than a regular classroom teacher
6. Increase public awareness of the availability and benefits of vocational education
7. Improve communications with businesspeople and listen to their training needs
8. Work on forming school-business partnerships
9. Give teachers a better understanding of how business operates
10. Increase the technical offerings for non-college bound students

The Florida Atlantic University (1979) survey respondents offered suggestions for the improvement of vocational education. Over forty percent of the employers agreed that the following would improve vocational education:

1. Offer new vocational education programs
2. Prepare students for good work habits
3. Offer training in the "basics" of reading and writing
4. Work on numerical skills with students
5. Increase employer input

The University of Missouri-Columbia (1987) longitudinal study of vocational education graduates from Missouri outlined the beliefs of these graduates. They also offered suggestions for the improvement of vocational education programs. These included the following:

1. Provide job experience for students

2. Offer job interview preparation and experience
3. Make students work harder
4. Teach maturity to students
5. Encourage further education
6. Provide job placement services
7. Provide individualized career counseling

Silberman (1986) concentrates on attempting to improve the status of high school vocational education. The following suggestions were offered:

1. Work on making vocational education more appealing to a wide range of students (college bound and non-college bound) by extending the school year and program offerings because the labor market needs skilled workers
2. Raise the quality of teachers by actively recruiting top talent and recruit business personnel to help teach (may mean twice the pay)
3. Raise the quality of learning by letting students have responsibility and work independently
4. Offer more field based experience (especially cooperative education)
5. Improve management by letting go of trying to systematically make teachers accountable but let them be responsible.
6. Establish trust in teachers

Stonehouse (1987) makes a bold statement by stating that high school students should be required to take at least one vocational education course. Eighty percent of the respondents said vocational education was more important than computer literacy. A few suggestions

were offered that would help improve vocational education. These included the following:

1. Offer retraining opportunities for teachers
2. Provide equipment that is up-to-date and similar to that used in business
3. Teach students how to get and hold a job
4. Allow employers to help with the curriculum
5. Offer qualified graduates with basic skills training

Wilms (1984) makes recommendations for vocational education reform that applies skills but does not actually provide specific skills training. Employers should be given the opportunity to help with skills training programs and develop curriculum. It is also important to pay attention to the needs of small business because they make up the majority of new jobs now and in the future.

Sawyers (1977) offers a wide variety of suggestions for the improvement of vocational education, yet there was some indecision among the respondents. The following are items with which the respondents showed agreement.

1. Offer career education in junior and high schools
2. Offer job entry skills training in trade and industry
3. Guide both boys and girls to occupational programs
4. Inform parents of the benefits of vocational education
5. Increase funding for updating vocational education programs
6. Give more emphasis in high school to earning a living
7. Provide in-service training for vocational educators, counselors, and administrators

8. Develop an on-going promotional program directed toward various publics in the community
9. Develop a more dynamic liaison between employers of vocational education graduates
10. Make sure junior high school students are informed concerning the vocational education program offerings

RESULTS OF ANALYSIS

The focus of this study was on (1) determining the types of training desired for entry-level employees in Tennessee (2) determining the educational levels desired for entry-level employees in Tennessee, (3) obtaining employer ratings of entry-level work skills for Tennessee secondary vocational education graduates as compared to non-vocational education graduates (4) determining the attitudes of Tennessee employers regarding obtaining increased funding for secondary vocational education through property or sales tax increases (5) obtaining employer opinions regarding the effectiveness of high school vocational education programs. Each purpose is discussed in this study.

Method of Study

The school systems used in this study were purposively selected to participate from the list of eligible systems. Ineligible systems were those scheduled for an on-sight evaluation this school year.

Three rural school systems were selected from each of the three Tennessee regions (east, middle, and west) to participate in this study. Three city school systems were also selected from each of the three Tennessee regions. This selection process allowed the researchers to obtain a representative sample from all three Tennessee regions and rural and city school systems. The following list identifies the school systems and particular high schools selected to participate in this research study.

EAST REGION

Unicoi County Schools (rural system)

Roane County Schools (rural system)

???? (rural system)

Hamilton County-Brainerd High School (city system)

Bristol City Schools (city system)

Knox County-Carter High School (city system)

MIDDLE REGION

Putnam County Schools (rural system)

Giles County Schools (rural system)

Wayne County Schools (rural system)

Rutherford County Schools-Riverdale High School (city system)

Davidson County Schools-Hillsboro High School (city system)

Davidson County Schools-Whites Creek High School (city system)

WEST REGION

Lauderdale County Schools (rural system)

Chester County Schools (rural system)

Haywood County Schools (rural system)

Memphis City Schools-Bartlett High School (city system)

Memphis City Schools-Sea Isle Vocational Technical School (city system)

Shelby County Schools-Collierville High School (city system)

After randomly selecting these school systems, an initial survey to obtain permission to participate was sent to the Vocational Directors for each of the above school systems. All systems returned the survey and agreed to participate.

Sea Isle Vocational-Technical Center was omitted from the eligible high schools because it is an adult education vocational-technical center. The researchers felt the employers of these graduates would not

be representative of the employers of traditional high school vocational education graduates.

After obtaining permission to participate from the school systems, the Vocational Directors were sent instructions to provide names and addresses of employers of 1987 vocational education graduates who had completed three or more hours of credit in one vocational education program area. Follow-up calls were made to the Vocational Directors who did not respond with the graduates' employers' names and addresses. Several of these vocational directors said their school system would not be able to be included in this final report.

The employers' names and addresses obtained from the above school system and high schools were used as a representative sample from the schools systems participating.

Instrumentation and Data Collection

The employers identified by the school system and high schools were sent the Employer Ratings of Vocational Education Effectiveness questionnaire. They were asked to provide their ratings of the work habits of vocational education graduates as compared to non-vocational education graduates and their opinions regarding the effectiveness of the secondary vocational education programs in their local communities.

Procedures

The responses to the Employer Ratings of Vocational Education Effectiveness questionnaire were entered into the University of Tennessee mainframe computer and analyzed using the SAS 82 statistical package. Descriptive statistics (frequency distributions) are included in this report.

Data Analysis

The completed questionnaire information was subjected to statistical analysis at the University of Tennessee-Knoxville computer center. Simple descriptive statistics were employed. The simple statistics included frequency counts and percentages.

Most of the respondents (17 or 32.7%) represented businesses employing less than 20 employees. The next greatest responses (13 or 25%) came from businesses employing 101 to 500 employees. This group was followed by the 51 to 100 employee size (12 respondents or 23.1%) then the last two groups of 21 to 50 employees and over 500 responded evenly with 5 each or 9.6% of the total respondents (see Table 1).

Table 1
Employer Responses by Number of Local Employers

Number of Local Employees	N	%
Up to 20	17	32.7
21 - 50	5	9.6
51 - 100	12	23.1
101 - 500	13	25.0
Over 500	<u>5</u>	<u>9.6</u>
Total	52	100.0

*9 Respondents did not complete this section

The first question of the survey ascertained how many entry level employees were hired last year by the employers. The greatest number (21 or 34.4%) of respondents indicated they only hired 1 to 5 employees last year. This was followed by over 26 employees at 16 or 26.2%, 6 to 10 employees at 14 or 23%, and 11 to 25 at 10 or 16.4% (see Table 2).

Table 2
Employer Respondents by the Number of Entry-Level Employees Hired Last Year

Number of Entry Level Employees Hired	N	%
1 - 5	21	34.4
6 - 10	14	23.0
11 - 25	10	16.4
Over 26	<u>16</u>	<u>26.2</u>
Total	61	100.0

When asked how many employees were hired last year that were under the age of twenty (the age of the average secondary vocational education program graduate) 28 or 46.7% only hired 1 to 5. The other respondents were split with 13 or 21.7% hiring 6 to 10, 10 or 16.6% hiring more than 26 and 9 or 15% hiring 11 to 25 employees (see Table 3).

Table 3
Entry-Level Employees Under Twenty Hired by Local Business Last Year

Number Hired Last Year	N	%
1 - 5	28	46.7
6 - 10	13	21.7
11 - 25	9	15.0
Over 26	<u>10</u>	<u>16.6</u>
Total*	60	100.0

*One respondent did not complete this section.

Rating the value of sources for finding new entry-level employees revealed walk-ins to be the most popular source with 56 of the respondents rating its value at 2.30 on a 3.0 scale. The next most valuable source was the vocational education programs with 53

respondents rating its value at 2.18. The other three choices were unimpressive with regards to value at 1.61 for help wanted advertisements, 1.60 for college placement services and the lowest value (1.31) reserved for employment agencies (see Table 4).

Table 4
Value of Sources for Finding New Entry-Level Employees

Source	N	Rating			*Mean Value
Help wanted advertisements	52	1	2	3	1.61
		: : X	: : :	: : :	
Walk-ins	56	1	2	3	2.30
		: : :	: : X	: : :	
Vocational Education Programs	53	1	2	3	2.18
		: : :	: : X	: : :	
College Placement Services	45	1	2	3	1.60
		: : X	: : :	: : :	
Employment Agencies	45	1	2	3	1.31
		: X	: : :	: : :	

*Value Rating of High = 3
Value Rating of Moderate = 2
Value Rating of Low = 1

Thirty-six or 55% of the business respondents indicated they were interested in hiring new entry-level employees with prior work experience in a similar job. Thirty-two or 52.46% of the business people noted high school vocational education was important to them when considering new applicants. Twenty-nine or 47.54% of the businesspeople responding expressed a desire for new entry-level employees to have cooperative education on-the-job training experience or be enrolled in a cooperative education program.

Ten respondents did not feel any training was necessary for their employees to succeed in their business.

Of the 61 business respondents, only four expressed a preference for employees with apprenticeship training. Seven felt prior work experience in a different job would be beneficial for their employees.

See Table 5 for the frequency of responses by individual school districts and schools.

Table 5
Type of Training Desired for Entry-Level Employees

Type of Training	School						Total
	A (N)	B (N)	C (N)	D (N)	E (N)	F (N)	
None	1	1	1	2	0	5	10
Cooperative education on -the-job training	3	8	4	9	3	2	29
Apprenticeship	2	1	0	0	1	0	4
Prior work experience in a similar job	6	7	2	9	3	9	36
Prior work experience in a different job	2	7	0	3	0	0	7
High school vocational education	4	6	7	7	6	2	32

The employers were asked to check all types of educational background desired for entry-level employees. Due to multiple responses, the number of responses exceeds the total number of respondents.

Forty-one of the 61 business people responding desired entry-level employees with a high school diploma. This accounted for 67.21% of the total employer respondents. Twenty-nine or 47.54% of the respondents felt a GED or other high school equivalent was important to them when

hiring entry-level employees. Twenty-three or 37.7% of the business respondents sought entry-level employees with two to three years of vocational education. Nineteen of the 61 business people desired 1/2 to one year of vocational education for their entry-level employees.

Thirteen of the 61 business people who represented employers of vocational education graduates did not specify any type of educational background for their entry-level employees. Eleven cited "other" types of educational backgrounds, including industry-specific training, professional organization training, and work experience training.

See Table 6 for the response breakdowns for each individual school system or school.

The business respondents who represented a sample of employers of 1987 vocational education graduates were asked to assign a quality rating to thirteen entry-level employee work skills. This rating was to compare their secondary vocational education graduates' entry-level work skills with their non-vocational education graduates' skills. Their ratings indicated whether their secondary vocational education graduates were better, the same, or worse than their non-vocational education graduates. Thirteen of the employers did not respond to these items, so the total number of respondents is less than the original 61 for each item.

Forty or 83.33% of the employers believed the quality of work produced by the vocational education graduates was better than the work of the non-vocational education graduates. Seven rated the quality of work of both types of graduates as the same while one employer noted that his vocational education graduate was worse than the other non-vocational graduates on the quality of work skill.

Table 6
Type of Educational Background Desired for Entry-Level Employees

Educational Background	School						Total
	A (N)	B (N)	C (N)	D (N)	E (N)	F (N)	
None	0	1	0	1	5	4	11
High school diploma	6	8	7	11	2	7	41
GED or high school equivalent	4	3	3	10	2	7	29
1/2 to 1 year of vocational education	3	3	2	4	2	5	19
2 to 3 years of vocational education	7	4	6	4	0	2	23
Community college or technical school degree	3	4	1	3	0	1	12
Other	2	0	2	3	2	4	13

Thirty-three or 70.21% of the employers respondents indicated that secondary vocational education graduates had better chances for advancement than non-vocational education graduates. Eleven respondents did not see any difference in the promotability of vocational education graduates as compared to non-vocational education graduates. Three employers felt the secondary vocational education graduates had less of a chance of being promoted than the non-secondary vocational education graduates.

Thirty or 63.83% of the employers felt the secondary vocational education graduates produced more work than the non-vocational education graduates. Fifteen saw no difference in the quantity of work of both types of graduates. Two employers believed their vocational education graduates produced less than their other employees.

Thirty-three or 68.75% of the employers believed their vocational education graduates had obtained better job-related technical knowledge than their non-vocational education graduates. Fifteen rated both types of graduates as the same on job-related technical knowledge, while none of the employers rated the secondary vocational education graduates as having less job-related technical knowledge.

Thirty-two or two-thirds of the employers responding felt the secondary vocational education graduates had better work habits and more positive work attitudes than the non-vocational education graduates. Fourteen saw no difference in the work habits and attitudes of the two groups of employees, but two felt their secondary vocational education graduates had worse work habits and more negative attitudes than the others.

Thirty of the 48 employer respondents indicated their secondary vocational education graduates were better than their non-vocational graduates on the following work skills: quantity of work, acceptance of responsibility, and willingness to learn and improve. Eighteen felt the willingness to learn and improve was the same for both groups of employees, while fifteen felt this way about the quantity of work and acceptance of responsibility.

Twenty-eight or 62.22% of the employers rated their secondary vocational education graduates as having better basic academic skills than their non-vocational education graduates. Sixteen saw the basic academic skills of the two groups of graduates as the same. Only one employer felt his secondary vocational education graduate's basic academic skills were worse than the other employees.

The punctuality and attendance ratings from the employers were evenly divided among the better and same rating categories. The cooperation toward management and cooperation toward co-workers categories were flip flopped. Twenty-seven employers indicated the two groups had the same level of cooperation toward co-workers while 27 employers indicated the secondary vocational education graduates had a higher level of cooperation toward the management.

Twenty-five of the 48 employer respondents believed the secondary vocational education graduates were better at complying with rules and regulations as compared to the non-vocational education graduates. Nineteen indicated the two groups were the same when it came to complying to rules and regulations while four felt secondary vocational education graduates were worse than the others.

Table 7 lists the specific better, same, and worse quality ratings for secondary vocational education graduates as compared to non-vocational education graduates.

Employers were asked to respond yes or no to the question "Do you believe there should be increased funding for secondary vocational education through a property tax increase?" Of the usable responses, 11 (21%) responded yes and 42 (79%) responded no. When asked to respond to the related question "Do you believe there should be increased funding for secondary vocational education through a sales tax increase?", 14 (26.4%) responded yes and 39 (73.6%) indicated no.

Table 7
 Quality Rating of Entry-Level Skills for Secondary Vocational Education
 Graduates Compared to Non-Vocational Education Graduates

Entry-Level Work Skills	Quality Rating						Total
	Better (N)	(%)	Same (N)	(%)	Worse (N)	(%)	
Quality of work	40	83.33	7	14.58	1	2.08	48
Quantity of work	30	63.83	15	31.91	2	4.26	47
Job-related technical knowledge	33	68.75	15	31.25	0	0.00	48
Basic academic skills	28	62.22	16	35.56	1	2.22	45
Good work habits/ attitudes	32	66.67	14	29.17	2	4.17	48
Acceptance of responsibility	30	62.50	15	31.25	3	6.25	48
Punctuality	23	47.92	22	45.83	3	6.25	48
Cooperation toward co-workers	20	41.67	27	56.25	1	2.08	48
Cooperation toward management	27	56.25	21	43.75	0	0.00	48
Willingness to learn and improve	30	62.50	18	37.50	0	0.00	48
Compliance with rules and policies	25	52.08	19	39.58	4	8.33	48
Attendance	22	45.83	22	45.83	4	8.33	48
Promotability	33	70.21	11	23.40	3	6.38	47

Twenty-one items were included that asked the employer respondents to state their opinions regarding the overall effectiveness of the high school secondary vocational education programs in their local communities. The employers had the option to agree or disagree with these general statements which addressed various issues related to vocational education. The total number of respondents varies for each statement because all 61 respondents did not express their opinions on these vocational education issues.

The highest number of respondents, 46 of 48 or 95.83%, expressed agreement that high school vocational education programs should offer work experience opportunities while students are still in school. This relates to the high frequency of employers who desired entry-level employees who had prior work experience, and more specifically, cooperative education experience.

Even though 45 of 48 or 93.75% of the respondents believed high schools should stress the "basics" in academic courses, only 59.57% felt today's students had low basic skills. Yet 65.96% did not feel secondary vocational education students had low basic skills. This is somewhat contrary to the opinions the researchers expected to obtain.

The employers responding were asked to express their opinions regarding the professional preparation necessary for vocational educators to be most effective in serving their secondary vocational students. Forty-four of 49 or 89.80% of the respondents felt vocational education teachers should have work experience related to their vocational education program area. Forty-three of 48 or 89.58% of the employers agreed that vocational education teachers should hold a Tennessee teaching license. Seventy-five percent of the employers

responding believed vocational education teachers should have a university degree related to their subject matter.

Forty-two of 47 or 89.36% of the employer respondents believed high school vocational education programs should be set up to prevent high school drop-outs.

According to 85.42% of the employers, the business community and community in general are supportive of secondary vocational education. This may relate to the opinion of 80.25% of the respondents that secondary vocational education is necessary to help provide a well-trained labor force for the future. In addition, 75% of the employers responding reduced their training time and costs for entry-level employees.

The employers were asked to state their opinions regarding the currency of the secondary vocational education programs in their local communities. Thirty-seven of 42 or 88.10% believed the secondary vocational education programs were using up-to-date curriculum materials. Thirty-five of 41 or 85.37% felt the secondary vocational education facilities were up-to-date. Thirty of 42 or 71.43% of the employer respondents agreed that the secondary vocational education programs were using current, up-to-date equipment.

Twenty-nine of 47 of the employers responding indicated that secondary vocational education graduates have greater chances for advancement than those without high school vocational education. Similarly, 33 of 47 or 70.21% had previously expressed in question #6 that their secondary vocational education graduates had better promotability than their non-vocational education graduates. Thirty-

five or 74.47% believed girls and boys should be encouraged to enroll in non-traditional vocational education programs.

An overwhelming 89.58% of the businesspeople responding agreed that additional high school vocational education programs should be added. As a check, the employers were asked whether or not high schools should reduce the numbers of secondary vocational education programs. Comparatively, 87.23% disagreed that the number of programs should be reduced.

Thirty-four of 47 employers indicated that they disagreed that secondary vocational education should be required for all students to receive career preparation. Likewise, 33 or 70.21% of the respondents indicated disagreement whether secondary vocational education should be required for all students to be better prepared for the world of work. In addition, 31 of 45 or 68.89% listed disagree to the statement that public schools do not offer vocational education early enough for students to develop necessary skills for success in the "real world."

See Table 8 for a detailed frequency distribution of the employers' opinions regarding the effectiveness of high school vocational education in their local communities.

Employers were asked to identify the factors which had influenced their opinions regarding secondary vocational education in their local communities. They were asked to check all factors that applied, so multiple responses are given and exceed the total number of respondents.

Fifty-two of the 61 total employers responding to the Employer Ratings of Vocational Education Effectiveness questionnaire indicated their opinions were influenced by the employees they had hired from local secondary vocational education programs. Therefore, it would

Table 8
Opinions Regarding Effectiveness of
High School Vocational Education in Home Area

Item	Rating		Total
	Agree (N) (%)	Disagree (N) (%)	
Additional high school vocational education programs should be added	43 89.58	5 10.42	48
High school vocational education programs are using up-to-date equipment	30 71.43	12 28.57	42
High school vocational education programs are using up-to-date curriculum materials	37 88.10	5 11.90	42
High school vocational education programs are using up-to-date facilities	35 85.37	6 14.63	41
High school vocational education programs should be set up to help prevent drop-outs	42 89.36	5 10.64	47
Today's high school students have low basic skills	28 59.57	19 40.43	47
Vocational education students have low basic skills	16 34.04	31 65.96	47
Girls and boys should be encouraged to enroll in non-traditional vocational education programs	35 74.47	12 25.53	47
High school vocational education should offer work experience opportunities	46 95.83	2 4.17	48
Vocational education should be required for all students to receive career preparation	13 27.66	34 72.34	47

Continued

Table 8 (continued)
 Opinions Regarding Effectiveness of
High School Vocational Education in Home Area

Item	Rating		Total
	Agree (N) (%)	Disagree (N) (%)	
Vocational education should be required for all students to be better prepared for the world of work	14 29.79	33 70.21	47
High schools should stress the "basics" in academic courses	45 93.75	3 6.25	48
High schools should reduce the number of vocational education programs	6 12.77	41 87.23	47
Business and the community in general are supportive of vocational education	41 85.42	7 14.58	48
Public schools do not offer vocational education early enough for students to develop the necessary skills	14 31.11	31 68.89	45
Vocational education is necessary to help provide a well-trained labor force for the future	38 80.85	9 19.15	47
Vocational education graduates have greater chances for advancement than those without high school vocational education	29 61.70	18 38.30	47
Vocational education teachers should have work experience related to their subject matter	44 89.80	5 10.20	49
Vocational education teachers should have a university degree related to their subject matter	36 75.00	12 25.00	48

Continued

Table 8 (continued)
 Opinions Regarding Effectiveness of
High School Vocational Education in Home Area

Item	Rating		Total
	Agree (N) (%)	Disagree (N) (%)	
Vocational education teachers should hold a state teaching license	43 89.58	5 10.42	48
Vocational education training reduces training time and costs for entry-level employees	36 75.00	12 25.00	48

appear that if they had positive experiences with their vocational education employees, their opinions would be positive and vice versa.

Forty-seven or 77% of the employers said their opinions regarding vocational education were, influenced by people they knew who had been enrolled in secondary vocational education. These people could include employees as in the above question and/or friends, family members, or colleagues.

Thirty-three of the 61 had talked to secondary vocational education teachers who had influenced their opinions. Some expressed positive comments about their local vocational education teachers, yet some wrote negative comments about their experiences with the teachers.

Nineteen or 31.15% of the businesspeople responding had been involved in vocational education beyond their commitment as employers. Serving as guest speakers, judging competitive events, and serving on advisory committees influenced these employers' opinions regarding the effectiveness of secondary vocational education.

Seventeen of the 61 employers had read secondary vocational education materials while nine had viewed vocational education media presentations. They believed these had made an impact on their opinions expressed on his employer ratings questionnaire. Thirteen of the employers responding had been enrolled in secondary vocational education as high school students and felt their experiences as students affected their opinions as employers. Three of the employer respondents admitted they knew very little about secondary vocational education.

See Table 9 to review these responses according to school systems and schools.

Table 9

Factors That Influenced Opinions on Secondary Vocational Education

Factor	School						Total
	A (N)	B (N)	C (N)	D (N)	E (N)	F (N)	
Enrolled in vocational education myself	1	1	6	3	1	1	13
Knew someone enrolled in vocational education	7	8	10	9	4	9	47
Read vocational education materials	2	1	1	7	0	6	17
Viewed vocational education media presentations	1	1	0	4	0	3	9
Talked to vocational education teachers	6	4	9	6	2	6	33
Involved in vocational education (i.e., guest speaker, judge, advisory committees)	4	2	5	3	3	2	19
Hired employees from vocational education	8	9	10	12	7	6	52
Do not know much about vocational education	1	0	0	0	0	2	3

CONCLUSIONS

1. Employers felt the recent secondary vocational graduates had better entry-level work skills than recent graduates without secondary vocational education.
2. The majority of employers indicated the secondary vocational graduates had better basic skills than the graduates without secondary vocational education.
3. Employers are pleased overall with the job performance of the secondary vocational education graduates they hire.
4. Employers agreed that the addition of more secondary vocational education programs would be effective in assisting local areas served by secondary vocational education programs.
5. Facilities and curriculum materials used in secondary vocational education programs are up-to date.
6. The role or roles for secondary vocational programs for helping to prevent dropouts has not been clearly defined.
7. Secondary vocational education students would benefit from more related work experience opportunities.
8. While secondary vocational education is not for all students high schools should stress more "basics".
9. Business and industry and local communities are supportive of secondary vocational education.
10. Employers do not support an increase in funding for secondary vocational education through an increase in property or sales tax.

11. Subject matter related work experience and a university degree would make the secondary vocational education teacher a better teacher.
12. A state teaching license should be required for secondary vocational education teachers.
13. Secondary vocational education is cost effective for business and industry in reduced training time for entry-level employees.
14. Employers opinions are influenced most by knowing someone in secondary vocational education, talking to secondary vocational education teachers, and from hiring employees from secondary vocational education programs.

RECOMMENDATIONS

1. High school counselors and administrators should continue to stress the importance of secondary vocational education to all students especially those at high risk of dropping out.
2. The role of secondary vocational education in helping to prevent dropouts should be more clearly defined.
3. The effectiveness of secondary vocational education programs in preparing students for the world of work should be emphasized by counselors and teachers when assisting students in career decisions.
4. Many secondary vocational education programs that currently do not have cooperative education programs should consider adding such programs in the future.
5. High school administrators hiring new secondary vocational teachers should emphasize the importance of subject matter work experience.
6. High school administrators should encourage secondary vocational education teachers to seek university degrees.
7. Local support from businesses and industries should be sought by local school districts for their secondary vocational education program with emphasis on the cost effectiveness to the community and to the businesses themselves.
8. Secondary vocational education teachers and high school administrators should be aware of the impact their program and the program's graduates have on opinions formed by local employers.
9. High schools and secondary vocational education programs should keep better records of program graduates job placement.

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APPENDIX A

EMPLOYER RATINGS OF VOCATIONAL EDUCATION EFFECTIVENESS

There are no right or wrong answers. Each questionnaire will be confidential; only collective data will be collected. Your response is very important, so please take a few minutes today to complete the questionnaire. Once completed, please return the questionnaire in the envelope provided.

Businessperson

Name _____ Title _____

Business Name _____

Business Address _____

Number of Local Employees _____ Type of Business _____

Vocational Student _____ Vocational Program _____

1. How many new entry-level employees have been hired by your local business in the last year? (check only one)

____ A. 1-5
____ B. 6-10
____ C. 11-25
____ D. 26-50
____ E. Over 50
2. How many young entry-level employees (under 20 years of age) have been hired by your local business in the last year? (check only one)

____ A. 1-5
____ B. 6-10
____ C. 11-25
____ D. 26-50
____ E. Over 50
3. Rate the value of the following sources for finding new entry-level employees. (3=high, 2=moderate, 1=low; Assign one number per item.)

____ A. Help Wanted Advertisements
____ B. Walk-ins
____ C. Vocational Education Programs
____ D. College Placement Services
____ E. Employment Agencies

(Please go to next page)

4. What type of training is desired for your business' entry-level employees? (check all that apply)
- ☐ A. None
☐ B. Cooperative Education On-The-Job Training
☐ C. Apprenticeship
☐ D. Prior Work Experience in a Similar Job
☐ E. Prior Work Experience in a Different Job
☐ F. High School Vocational Education
5. What type of educational background is desired for your business' entry-level employees? (check all that apply)
- ☐ A. None
☐ B. High School Diploma
☐ C. GED or Other High School Equivalent
☐ D. Skills Training in Vocational Education (1/2 to 1 year)
☐ E. Completion of a Vocational Education Program (2 to 3 years credits)
☐ F. Community College or Technical School Degree
☐ G. Other (please specify) _____
6. Rate the quality of entry level work skills for the vocational education graduate listed as compared to non-vocational education graduate.
- | Much Better | Better | Same | Worse | Much Worse | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------------------|
| ☐ | ☐ | ☐ | ☐ | ☐ | A. quality of work |
| ☐ | ☐ | ☐ | ☐ | ☐ | B. quantity of work |
| ☐ | ☐ | ☐ | ☐ | ☐ | C. job related technical knowledge |
| ☐ | ☐ | ☐ | ☐ | ☐ | D. basic academic skills |
| ☐ | ☐ | ☐ | ☐ | ☐ | E. good work habits/ attitudes |
| ☐ | ☐ | ☐ | ☐ | ☐ | F. acceptance of responsibility |
| ☐ | ☐ | ☐ | ☐ | ☐ | G. punctuality |
| ☐ | ☐ | ☐ | ☐ | ☐ | H. cooperation toward co-workers |
| ☐ | ☐ | ☐ | ☐ | ☐ | I. cooperation toward management |
| ☐ | ☐ | ☐ | ☐ | ☐ | J. willingness to learn and improve |
| ☐ | ☐ | ☐ | ☐ | ☐ | K. compliance with rules and policies |
| ☐ | ☐ | ☐ | ☐ | ☐ | L. attendance |
| ☐ | ☐ | ☐ | ☐ | ☐ | M. promotability |
| ☐ | ☐ | ☐ | ☐ | ☐ | N. punctuality |

(Please go to next page)

7. Do you believe there should be increased funding for vocational education through a property tax increase? (circle only one)

A. Yes B. No

8. Do you believe there should be increased funding for vocational education through a sales tax increase?

A. Yes B. No

9. Indicate your opinion on the following statements regarding the effectiveness of high school vocational education programs in your area. (Place a 6, 5, 4, 3, 2, or 1 for each item listed below)

6-strongly agree 5-mildly agree 4-agree
3-disagree 2-mildly disagree 1-strongly disagree

- ____ A. Additional high school vocational education programs should be added, so more students could be enrolled.
- ____ B. High school vocational education programs are using up-to-date equipment.
- ____ C. High school vocational education programs are using up-to-date curriculum materials.
- ____ D. High school vocational education programs are using up-to-date facilities.
- ____ E. High school vocational education should be set up to help prevent drop-outs.
- ____ F. Today's high school students have low basic skills.
- ____ G. Students enrolled in high school vocational education have low basic skills.
- ____ H. Both boys and girls should be encouraged to enroll in non-traditional vocational education programs (i.e., girls in auto mechanics and boys in fashion merchandising).
- ____ I. High school vocational education should offer students opportunities to gain work experience while in high school.
- ____ J. Vocational education should be required for all students, so they will have the chance to receive career preparation.
- ____ K. Vocational education should be required for all students, so they will be better prepared for the world of work.
- ____ L. High schools should stress the "basics" in academic courses.

(Please go on to next page)

6-strongly agree 5-mildly agree 4-agree
3-disagree 2-mildly disagree 1-strongly disagree

- ___ M. High schools should reduce the numbers of vocational education programs.
- ___ N. Business and the community in general are supportive of high school vocational education.
- ___ O. Public schools do not offer vocational education early enough for students to develop the necessary skills.
- ___ P. High school vocational education is necessary to help provide a well-trained labor force for the future.
- ___ Q. Graduates of high school vocational education programs have greater chances for advancement than those without high school vocational education.
- ___ R. High school vocational education teachers should have work experience related to their subject matter field.
- ___ S. High school vocational education teachers should have a university degree related to their subject matter field.
- ___ T. High school vocational education teachers should hold a state teaching license.
- ___ U. High school vocational education training reduces training time and costs for entry-level employees.

10. What do you believe influenced your opinions on vocational education?
(check all that apply)

- ___ A. being enrolled in vocational education myself
- ___ B. knowing someone personally who is or was enrolled in vocational education
- ___ C. materials I have read concerning vocational education
- ___ D. media presentations concerning vocational education
- ___ E. vocational teachers who have talked to me about vocational education
- ___ F. my involvement in vocational education as a businessperson (i.e., guest speaker, judge at competitive events, advisory committee member, etc.)
- ___ G. employees I have hired from the vocational education program
- ___ H. the fact that I do not know much about vocational education
(Please go to next page)

11. Please provide any suggestions you may have for the improvement of high school vocational education in your school district.

THANK YOU FOR YOUR TIME AND ATTENTION!